11. $z = \cos\theta + i\sin\theta$ 일때 다음이 성립함을 보여라.

$$z + \frac{1}{z} = 2\cos\theta$$

$$z - \frac{1}{z} = i2\sin\theta$$

Good!

$z = \cos\theta + i\sin\theta = e^{i\theta}$,

$\frac{1}{z} = z^{-1} = e^{-i\theta} = \cos\theta - i\sin\theta$,

$\therefore z + \frac{1}{z} = (\cos\theta + i\sin\theta) + (\cos\theta - i\sin\theta) = 2\cos\theta$,

$z - \frac{1}{z} = (\cos\theta + i\sin\theta) - (\cos\theta - i\sin\theta)$

$= i2\sin\theta$